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Oral health-related quality of life in Iranian patients with spinal cord injury: A case–control study

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ABSTRACT

Introduction: The study aimed to compare the oral health variables, general, and oral health-related quality of life (QoL), depression, and anxiety between spinal cord injury (SCI) patients and healthy controls and also to determine the key factors related to the oral health-related quality of life (OHRQoL) in the SCI patients.

Methods: A total of 203 SCI patients and 203 healthy controls were enrolled. Patients and healthy adults were invited to attend a dental clinic to complete the study measures and undergo oral clinical examinations. OHRQoL was assessed by the 14-item Oral Health Impact Profile (OHIP-14), and the general health-related quality of life (GHRQoL) was evaluated by SF-36. In SCI patients, depression and anxiety were recorded using the Hospital Anxiety and Depression Scale (HADS), while Functional Assessment Measure (FAM) was used to assess dependence and disability. All the subjects were examined for caries which was quantified using the decayed, missing, and filled Teeth (DMFT) index, gingival bleeding index (GI), plaque index, and periodontal status by community periodontal index (CPI).

Results: The analysis of covariance (ANCOVA) revealed significant differences between the two groups in terms of oral health expressed in DMFT, oral hygiene, and periodontal status, controlled for age, gender, family income, and occupational status ($p < 0.001$). Using the hierarchical linear regression analyses, in the final model, which accounted for 18% of the total variance ($F(126.7)$, $p < 0.01$), significant predictors of OHRQoL were irregular tooth brushing ($\beta = 1.23$; 95% CI = 1.06; 1.41), smoking ($\beta = 0.82$; 95% CI = 0.66; 0.97), dry mouth ($\beta = 0.37$; 95% CI = −0.65 to 0.10) functional and motor functioning ($\beta = 0.32$; 95% CI = −0.45 to 0.17), DMFT ($\beta = 0.06$; 95% CI = 0.02; 0.09), CPI ($\beta = 0.22$; 95% CI = 0.04; 0.04), physical component measure of GHRQoL ($\beta = -0.275$; 95% CI = −0.42 to 0.13), lesion level at the lumbar–sacral ($\beta = -0.18$; 95% CI = −0.29 to −0.06) and thoracic level ($\beta = -0.09$; 95% CI = −0.11 to −0.06).

Conclusion: SCI patients had poor oral hygiene practices, greater levels of plaque, gingival bleeding, and caries experience than the healthy controls. In addition, more number of SCI patients had periodontal pockets and dry mouth than the comparative group. SCI patients experienced more depression and anxiety, poor GHRQoL, and OHRQoL than the healthy control group. The factors that influenced OHRQoL in SCI patients were age, toothbrushing frequency, smoking, oral clinical status, depression, physical component of GHRQoL, and level of lesion.